WHAT IS CLAIMED IS:

1. A method comprising:

scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data;

scanning the object with the CBVCT system without the beam pass array positioned between the x-ray source and the object to acquire image data; and

correcting the image data using the scatter data.

2. A method in accordance with Claim 1 wherein said correcting comprises angularly interpolating at least one of the scatter data and the image data to correct for angular misalignment.

3. A method in accordance with Claim 2 wherein said angularly interpolating comprises angularly interpolating the image data to correct for angular misalignment, said method further comprising angularly and spatially interpolating the scatter data to obtain a projection scatter estimate.

4. A method in accordance with Claim 1 further comprising angularly and spatially interpolating the scatter data to obtain a projection scatter estimate.

5. A method in accordance with Claim 4 wherein said correcting the image data comprises subtracting the projection scatter estimate from the image data on a pixel by pixel basis.

6. A method in accordance with Claim 1 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array

comprises a plate with a plurality of openings therethrough, each opening spaced from other opening by at least 3 mm.

7. A method in accordance with Claim 1 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at least 1 mm.

8. A method in accordance with Claim 7 wherein said wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at least 1 mm comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at most 2 mm.

9. A method in accordance with Claim 8 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of openings therethrough, each opening spaced from other opening by at least 3 mm.

10. A cone beam volumetric computed tomography system comprising:

an x-ray source;

a detector positioned to receive x-rays emitted from said source; and

a beam pass array removably positioned between said source and said detector.

11. A system according to Claim 10 wherein said beam pass array comprises a plate with a plurality of openings therethrough, each opening spaced from other opening by at least 3 mm.

12. A system according to Claim 11 wherein said opening comprise a plurality of circular openings, each said circular opening having a diameter of at least 1 mm.

13. A system according to Claim 12 wherein each said circular opening having a diameter of at most 2 mm.

14. A system according to Claim 13 wherein each said circular opening having a diameter of approximately 1.5 mm.

15. A system according to Claim 10 further comprising a computer operationally coupled to said detector, said computer configured to:

receive scatter data from a scan of an object;

receive image data from a scan the object with the beam pass array removed; and

correct the image data using the scatter data.

16. A system according to Claim 15 wherein said computer further configured to angularly interpolate at least one of the scatter data and the image data to correct for angular misalignment.

17. A system according to Claim 16 wherein said computer further configured to angularly and spatially interpolate the scatter data to obtain a projection scatter estimate.

18. A system according to Claim 16 wherein said computer further configured to correct the image data by subtracting the projection scatter estimate from the image data on a pixel by pixel basis.

19. A computer readable medium encoded with a program configured to instruct a computer to:

receive scatter data from a cone beam scan of an object with a beam pass array present;

receive image data from a cone beam scan the object without the beam pass array present; and

correct the image data using the scatter data.

20. A medium in accordance with Claim 19 wherein said program further configured to instruct the computer to angularly and spatially interpolate the scatter data to obtain a projection scatter estimate.

21. A medium in accordance with Claim 17 wherein said program further configured to instruct angularly interpolate the image data to correct for angular misalignment.